

***REMARKS***

This is a full and timely response to the outstanding non-final Office Action mailed March 31, 2004. Reconsideration and allowance of the application and presently pending claims 1-17, as amended, are respectfully requested.

1. Present Status of Patent Application

Upon entry of the amendments in this response, claims 1-17 remain pending in the present application. More specifically, claims 1, 8, 9 and 10 are directly amended and claims 12-17 are added. These amendments are specifically described hereinafter. It is believed that the foregoing amendments add no new matter to the present application.

2. Response to Objection of Claims 1 and 8

In the Office Action, claims 1 and 8 are objected to because both claims use a semicolon where a colon appears to be more appropriate. Applicants have amended claims 1 and 8 as suggested by the Examiner, and respectfully request that the objection be withdrawn. Applicants thank the Examiner for his suggestion.

Applicants observe that the amendments to claims 1 and 8 are not made in response to a rejection made by the Examiner based upon cited art of record or under statute. Furthermore, the amendments to claims 1 and 8 do not narrow the scope of these claims as originally filed. Accordingly, no prosecution history estoppel arises from the amendment to these claims.

3. Response to Rejection of Claims 9 and 10 Under 35 U.S.C. §112, Second Paragraph

In the Office Action, claims 9 and 10 stand rejected under 35 U.S.C. §112, second paragraph, as allegedly having insufficient antecedent basis for the limitation "said plurality of signals" in the claim. Applicants have amended the claims by replacing the term "said" with the term "a" to provide antecedent basis.

Applicants observe that the amendments to claims 9 and 10 are not made in response to a rejection made by the Examiner based upon cited art of record.

Furthermore, the amendments to claims 9 and 10 do not narrow the scope of these claims as originally filed. Accordingly, no prosecution history estoppel arises from the amendment to these claims.

4. Response to Rejection of Claims 1-3 and 5-8 Under 35 U.S.C. §102(b)

In the Office Action, claims 1-3 and 5-8 stand rejected under 35 U.S.C. §102(b) as allegedly being unpatentable by *Iijima* (U.S. Patent 4,293,739). For a proper rejection of a claim under 35 U.S.C. Section 102, the cited reference must disclose all elements/features/steps of the claim. See, e.g., *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988).

a. Independent Claims 1, 5, 6 and 8

Applicants respectfully submit that independent claim 1, as amended, is allowable for at least the reason that *Iijima* does not disclose, teach, or suggest the feature of a “plurality of amplifiers ... such that at least one *leakage signal originating on a first communication connection of said plurality of communication connections cannot propagate from said first communication connection to a second communication connection* of said plurality of communication connections” as recited in claim 1 (emphasis added). Nor does *Iijima* disclose, teach, or suggest the feature of a “shunting at least one leakage signal originating on said first communication connection away from a second communication connection coupled to said communication device” as recited in claim 5, the feature of a “shunting means” that “prevents at least one leakage signal originating on said first communication connection from propagating to a second communication connection coupled to said communication device” as recited in claim 6, or the feature of a “plurality of amplifiers have a nearly-zero impedance characteristic such that at least one leakage signal originating on a first communication connection coupled to said communication device cannot propagate from said first communication connection to a second communication connection coupled to said communication device” as recited in claim 8.

Applicants believe that *Iijima* does not disclose, teach, or suggest using any type of device such that leakage signals cannot propagate from said first communication connection to a second communication connection. At most, *Iijima* discloses a “CIRCUIT WITH CROSSTALK ELIMINATION CAPABILITY” (Title). *Iijima* is apparently limited to at most a system wherein “various line conductors are in such close proximity that there is a linking impedance such as stray capacitance between them, as represented by capacitors 4, 5, 6. This impedance may cause crosstalk between various lines. The invention eliminates this crosstalk by ....” (Col. 2, Line 67 through Col. 3, Line 4). *Iijima* is limited to disclosing that only crosstalk is eliminated. Nowhere is there any disclosure whatsoever of the feature of a “plurality of amplifiers ... such that at least one leakage signal originating on a first communication connection of said plurality of communication connections cannot propagate from said first communication connection to a second communication connection of said plurality of communication connections” as recited in claim 1, for example.

The Applicants respectfully direct the Examiner’s attention to *Iijima* figures 1 and 2 where the stray capacitance “elements” are indicated by reference numerals 4, 5 and 6. More particularly, the Examiner’s attention is drawn to the observation that there is no physical connection between the illustrated circuits 1, 2 or 3. Accordingly, a leakage signal as recited in claims 1, 5, 6 and 8 would not exist on the *Iijima* system.

In contrast, embodiments of the present invention are directed to a multiple channel DSL system wherein a “plurality of digital devices may communicate concurrently with digital equipment 34 employing time-division multiplexing” (Page 7, Lines 8-9) or other suitable technologies. In these systems employing “multiple channel DSL technology, attempts have been made to couple a plurality of different subscriber loops into a single multiple channel DSL digital equipment unit, thus coupling a plurality of different CPs to a single multiple channel DSL digital equipment unit” (Page 8, lines 4-7). Clearly, is impossible for *Iijima* to address or anticipate the problems solved by the various embodiments of the present invention. That is, unforeseen and heretofore unknown benefits are provided by embodiments of the present invention.

However, the allowability of the claims must be based upon expressly recited limitations of the claim. An Applicant is ordinarily entitled to be his own lexicographer (*In re Castaing*, 429 F.2d 461, 166 U.S.P.Q. 550, 551 (C.C.P.A. 1970). That is, the Applicants are allowed to define terms, regardless of common or technical meaning, so long as the meaning is clear and the definition is not repugnant to the normal usage of the term. In the specification of the present invention the term "leakage signal" is clearly defined in a permissible manner by the Applicants. ***Applicants respectfully request that the Examiner give due consideration to the Applicants' use of the permissibly defined term "leakage signal" in view of other references,*** an in particular to *Iijima*, which discloses solutions to crosstalk distortion, which is substantially different from leakage signal distortion.

"When a plurality of communication connections are coupled to a common communication device, leakage signals associated with signals on one of the communication connections may propagate onto one or more of the other communication connections. Such a propagated signal is defined herein as a leakage signal." (Page 20, Lines 13-16.) "Each of the communication connections are physically coupled to each other by virtue of their connection to various electrical devices. For example, as illustrated in FIG. 3, subscriber loop 26A is physically coupled to subscriber loop 26D through low pass filter 36A, communication connection 62 and low pass filter 36D. ... One skilled in the art will appreciate that leakage signal 80 will have some characteristics which are similar to the well known phenomenon of cross-talk. However, cross-talk is quite different from the leakage signal 80. Cross-talk arises from the inductive or capacitive coupling between two communication connections which are substantially adjacent to and parallel to each other. Thus, leakage signal 80 is not considered to be a cross-talk-phenomenon." (Page 12, Lines 5-18.)

With respect to the present rejection of independent claims 1, 5, 6 and 8, the Applicants are reciting the permissibly defined feature of the leakage signal. *Iijima* does not disclose, teach, or suggest the feature of a leakage signal. Accordingly, *Iijima* does not anticipate claims 1, 5, 6 or 8, and the rejection to these claims should be withdrawn.

b. Claims 2-3 and 7

Because independent claim 1 is allowable over the cited art of record, dependent claims 2-3 (which depend from independent claim 1) are allowable as a matter of law for at least the reason the dependent claims 2-3 contain all features/elements of independent claim 1. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Similarly, because independent claim 6 is allowable over the cited art of record, dependent claim 7 (which depends from independent claim 6) is allowable as a matter of law for at least the reason that the dependent claim 7 contains all features/elements of independent claim 6. Accordingly, the rejection to these claims should be withdrawn.

3. Response to Rejection of Claims Under 35 U.S.C. §103(a)

In the Office Action, claim 4 stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Iijima*. Claims 9-11 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Iijima* in view of *McHale* (U.S. Patent 6,088,430). It is well-established at law that, for a proper rejection of a claim under 35 U.S.C. §103 as being obvious based upon a combination of references, the cited combination of references must disclose, teach, or suggest, either implicitly or explicitly, all elements/features/steps of the claim at issue. See, e.g., *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

Because independent claim 1 is allowable over the cited art of record, dependent claim 4 (which depends from independent claim 1) is allowable as a matter of law for at least the reason the dependent claim 4 contains all features/elements of independent claim 1. Similarly, because independent claim 8 is allowable over the cited art of record, dependent claims 9-11 (which depend from independent claim 8) are allowable as a matter of law for at least the reason that the dependent claims 9-11 contain all features/elements of independent claim 8. Accordingly, the rejection to these claims should be withdrawn.

4. Newly Added Claims 12-17

New claims 12-17 are based on subject matter that is explicit and/or inherent within the description of the specification and/or the drawings. Applicants submit that no

new matter has been added in the new claims 12-17, and that new claims 12-17 are allowable over the cited prior art. Therefore, Applicants request the Examiner to enter and allow the above new claims.

**CONCLUSION**

In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-17 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,



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